

**Media Briefing on Xiaonanhai Dam, Upper Yangtze River**  
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**International Rivers | April 18, 2012**

This media briefing provides an overview of the key environmental and social issues around the Xiaonanhai Hydropower Project on the Upper Yangtze. The content of the briefing is drawn from the Chinese geologist Fan Xiao's *Open Letter on the Protection of Upper Yangtze Rare and Endangered Fish Species and their Ecology*, from Chinese civil society documents, and from Chinese and International media.

### **Summary**

If built, the US\$3.75 billion Xiaonanhai Dam will have an installed capacity of 1760 megawatts. The project is an example of a powerful municipality seeking short-term economic benefits at the price of habitat for endangered fish species, relocating prosperous communities, and with two other proposed dams, turning the last undammed part of the Yangtze River into a series of reservoirs. The early preparatory work for the Xiaonanhai hydropower project on the Upper Yangtze River started on March 29, 2012 despite wide criticism from experts and the general public. The project does not provide significant returns for its investment, nor would it play a significant role in meeting Chongqing's energy needs. With a higher cost per kilowatt than other dams on the Yangtze, the dam would irreversibly destroy the habitat for around 40 rare and endangered freshwater fish species. The dam and its reservoir are located in the Upper Yangtze Rare and Endemic Fish National Nature Reserve, whose boundaries were redrawn twice from 2005 to 2011 to make way for hydropower development. Chinese experts and civil society groups are calling for a stop of the early preparatory work, for public hearings and the administrative review of the Xiaonanhai Project.

### **Re-drawing of Fishery Reserve**

As the third largest river in the world, the Yangtze River is home to many important freshwater aquatic species and ecosystems. However, attempts to make way for hydropower development have repeatedly reduced the size and degraded the quality of this haven for aquatic life. Many critical fish species have become endangered since the construction of the Gezhouba and Three Gorges dams. In order to mitigate the impact from dams and protect the habitats of rare and endemic fish species in the Upper Yangtze River, a provincial nature reserve was created in 1997 along the Hejiang to Leibo course of the Upper Yangtze. It was given national status in 2000.

The nature reserve consists of core, buffer and experimental zones. The core and buffer zones are essential for fish survival. In 2005, the boundary of the reserve was modified, in order to develop two large-scale hydropower plants – Xiangjiaba (6400 megawatts) and Xiluodu (13,860 megawatts). The reserve was reduced in size and moved downstream from the section immediately below the Xiangjiaba Dam in Yibin to the tail end of the Three Gorges Reservoir in Chongqing. The Chishui Tributary of Yangtze, as well as the Yibin to Yuebo section of the Min

River, were added to the redrawn reserve, and the whole area was renamed the Upper Yangtze Rare and Endemic Fish National Nature Reserve.

After the modification, the State Environmental Protection Administration (now the Ministry of Environmental Protection, or MEP) clearly stated, “The modification plan should proceed according to the State Council approval opinion. It should be made clear both in revised plans and during construction that no new hydropower project is to be developed in the modified nature reserve.” However, another modification proposal was brought up in 2010 to allow for the Xiaonanhai Dam. It was approved by the National Nature Reserve Review Committee and was announced by MEP’s public circular no. 1 in 2011.

The 22.5 km river section downstream from the Xiaonhanhai hydropower station will be removed from the protection zone, while a 73.3 km section above the dam has been downgraded from a buffer zone to an experimental zone to become a reservoir for Xiaonanhai. This will have fatal consequences for the aquatic ecosystem of the Upper Yangtze River and destroy the essence of the nature reserve. To make matters worse, plans to build two other dams immediately upstream from Xiaonanhai, Zhuyangxi and Shipeng, will turn the entire upper Yangtze mainstream into an inter-locking series of cascade reservoirs.

### **Yangtze fish more threatened than the Giant Panda or Tibetan Antelope**

The Xiaonanhai area is home to the richest collection of endemic fish species in China and contains the highest number of threatened species in the country. This section of the Upper Yangtze River provides an important ecological corridor for the functional life cycle of endemic fish species and the “Four Great Domestic Fish Species.”<sup>1</sup> Building the Xiaonanhai Dam would fragment the migratory channels, inundate shallow spawning grounds and fundamentally change the habitat for fish species. This would create a more serious threat to the survival of the Upper Yangtze fish species than what other endangered species such as the Giant Panda and Tibetan Antelope have previously faced. Because the local Yangtze fishing industry depends on the aquatic system, it is also important for the public to realize the potential risks that the Xiaonanhai project could bring to local fishing industry.

### **Loopholes in the Environmental Impact Assessment Process**

Although conducting an Environmental Impact Assessment (EIA) before any hydropower projects is legally mandated in China<sup>2</sup>, construction of hydropower development projects often start even before a full EIA report is approved. This is because early preparatory work, also known as *santong yiping* (site preparation stage, which includes access to water supply, electricity and roads, as well as land leveling) can start before a project EIA is approved. An EIA report for the *santong yiping* stage is required, but is often done superficially, only to show compliance with the process. On February 22, 2012, the Chongqing government announced on

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<sup>1</sup> Including the grass carp, black carp, silver carp and bighead carp

<sup>2</sup> The newest regulations include the *Provisional Measures for the Evaluation of River Hydropower Development Plans and Planning Environmental Impact Assessment* (National Development and Reform Committee, 2011) and *Notice on Further Strengthening Environmental Protection during Hydropower Construction*

its website that public comments for the *santong yiping* work of Xiaonanhai could be submitted between February 23 and March 3. On March 2, a second announcement was published with the finished *Santong Yiping* EIA report. It was clear that the EIA report was hastily done for the construction work to start as soon as possible. As many previous examples have shown, although no project EIA for Xiaonanhai has been approved, once “early preparatory work” has been done, investment may be so significant that the dam cannot be stopped. In many cases, the dam construction may be almost finished at the end of the “preparatory work.”

### **The Costs outweigh the benefits**

Sources of electricity generation and economic profit for Chongqing can be substituted with alternative plans, but the Yangtze River ecosystem would be irreversibly damaged by the construction of the Xiaonanhai Dam.

The Xiaonanhai valley’s wide river bed and a low drop in height make it not conducive for hydropower generation. The proposed dam height is only around 50 meters (compared to the 100-300 meter dam heights of the Three Gorges and Jinsha dams) and the investment per unit of installed capacity at the Xiaonanhai plant is a substantial 13,553 RMB/kW, more than twice the cost of the adjacent dams<sup>3</sup>. The 46.47 km<sup>2</sup> area that is going to be inundated by the Xiaonanhai Dam is also the most productive human settlement and concentration of arable land along the banks of the Yangtze River. The land at the proposed dam site is blessed with fertile soil and an agreeable climate. It is a major vegetables supplier and “Special Fruits Growth Zone” for the Chongqing Municipality, delivering 400,000-500,000 kilos of produce daily. Farmers live prosperous lifestyle and will have to struggle to achieve an equivalent income if the dam floods their traditional farming bases and displaces them to poorer soil, climate and irrigation conditions.

Since the early 1990s, economic and environmental concerns have repeatedly delayed proposed plans to build dams on this section of the Yangtze River. The trend changed in 2009 when the Chongqing municipal government, under the leadership of recently deposed Party Secretary Bo Xilai, added Xiaonanhai to its list of key projects for the 12<sup>th</sup> Five-Year Plan (2011-2015). The municipal government saw the potential boost for GDP growth, job creation, taxation and other revenues that Xiaonanhai would bring, but failed to pay attention to the public interest and environmental responsibility. Sacrificing the public interest in environmental health, the Chongqing Municipality follows a development model that is neither sustainable nor economic for its citizens.

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<sup>3</sup> Three Gorges 4,950 RMB/kW; Xiluodu 3,538 RMB/kW; and Xiangjiaba 5,749 RMB/kW. All are under 6,000 RMB/kWh.

## **Quotes from Chinese Experts and Activists:**

**“(The nature reserve) is most crucial to the survival of the rare and endemic fish species in the Upper Yangtze nature reserve, and to the development of fishery in the Three Gorges Reservoir. Therefore, it must be kept free, and no hydro projects should be built there. The important role played by this ecological corridor cannot be replaced by fish ladders or any other similar designs.”**

- Professor Cao Wenxuan, academic at the Institute of Hydrobiology at the Chinese Academy of Sciences and leading Chinese fish expert

**“In the 1990 River Basin Plan, the installed capacity of Xiaonanhai is only 1GW. Now the capacity has increased to almost 2 GW, only because Chongqing Municipality wants to make it a mega project, stimulate the local economy and receive taxation profits. To generate more than 10 billion KW per year is only Chongqing government’s wishful thinking, and cannot be achieved.”<sup>4</sup>**

- Weng Lida, chief of the Yangtze River Water Resources Protection Bureau

**“There are many aspects of the Environmental Impact Assessment that need improvement, especially regarding implementation... even spending hundreds of millions of dollars in *Santong Yiping* (early preparatory) does not count as starting construction. Only when water is stopped and a dam is closed, has construction started...EIAs are just a “show”, sunk investments at the site will “force” government institutions to approve the project.**

**"If a green light is given to Chongqing this time, other provinces along the reserve could always file similar requests for developmental reasons, which will endanger the existence of this natural reserve - and many others all around the country. "<sup>5</sup>**

- Li Bo, Executive Director, Friends of Nature

**“Many companies conduct EIA just to get project approval. In actual construction, EIA decisions are not implemented and ignored. Who will make sure these companies fulfill their legal responsibilities? There is no clear regulation in the EIA law, and implementation is poor.”<sup>6</sup>**

- Fu Mingde, Lawyer, Zhong Yin Lawyers

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<sup>4</sup> The Difficulties of Xiaonanhai Hydropower Projects, Caijing, April 9th, 2012

<sup>5</sup> [Shrinking of Conservation Zone Draws Indignation, China Daily, January 25th, 2011](#)

<sup>6</sup> Rare and Endangered Fishery Reserve Make Way for Hydropower Station Again: EIA process was questioned, Science Daily, March 23, 2012

## **Key Documents**

**Briefing on Xiaonanhai Dam and Its Impact on the Upper Yangtze Rare and Endemic Fishery** by Fan Xiao (February, 2011)

(Includes Maps of the redrawn fish reserve and photos of endangered fish species)

**Open Letter from Chinese Environmental NGOs: A Call for an Immediate Stop on the Xiaonanhai Project (Pre-construction Preparation)** (March 31st, 2012)

[Slideshow \(In Chinese\): Urgent: Rare and Endemic Fish are facing deadly threats](#) (March, 2012)

## **Press Coverage**

[China to Flood Nature Reserve with Latest Yangtze Dam](#)- Reuters (March 29, 2012)

[The Dams of Chongqing](#)- Foreign Policy (March 30, 2012)

[Dam versus Reserve](#) – China Daily (February 26, 2011)

[Shrinking of Conservation Zone Draws Indignation](#)- China Daily (January 25, 2011)

## **Chinese Media Coverage (In Chinese)**

[难解小南海水电站](#) – 财经 (April 9, 2012)

[两院专家联名上书总理 吁请叫停小南海水电站](#) – 中国低碳网 (April 1, 2012)

[为小南海电站投注你的眼光](#) – 刘鉴强 (March 28, 2012)

[珍惜鱼类保护区再次为水电让道 环评遭质疑](#)– 科技日报 (March 23, 2012)

[小南海水电建设致使长江保护区遭切割](#)–南方都市报 (March 15, 2012)

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